2. (amended) The method according to claim [1] **57**, wherein the reactive halide composition comprises XeF_2.

3. (amended) The method according to claim [1] **57**, wherein the reactive halide composition is selected from the group consisting of SF_6, SiF_4, and Si_2F_6.

4. (amended) The method according to claim [1] **57**, wherein the reactive halide composition is selected from the group consisting of SiF_2 and SiF_3 radicals.

12. (amended) The method according to claim [1] **57**, wherein the gas-phase reactive halide composition is selected from the group consisting of SiF_2 and SiF_3 radicals and the reactive halide composition is generated by reaction of XeF_2 with silicon.

13. (amended) The method according to claim [1] **57**, wherein the gas-phase reactive halide composition is selected from the group consisting of SiF_2 and SiF_3 radicals and the reactive halide composition is generated by passing SiF_4 through an energetic dissociation source.

24. (amended) The method according to claim **[19] 57**, wherein the **[cleaning gas further comprising a] noble metal residue comprises iridium, and the cleaning gas comprises XeF_2 and at least one** gas phase reactive halide species selected from the group consisting of SF_6, SiF_4, Si_2F_6 and SiF_2 and SiF_3 radicals and the microelectronic device structure, is further contacted with a cleaning enhancement agent.

Please add the following new claims:

57. A method for removing from a microelectronic device structure a noble metal residue including at least one metal selected from the group consisting of platinum, palladium, iridium and rhodium, the method comprising contacting the microelectronic device structure with a gas-phase reactive halide composition to remove the residue.

58. A method for removing from a microelectronic device structure, a noble metal residue comprising iridium said method comprising, contacting the microelectronic device structure with a